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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/785,529

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Donald A. Meltzer

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LEGAL DEPARTMENT
LUBRIZOL ADVANCED MATERIALS, INC
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EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

09/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,529	Applicant(s) MELTZER ET AL.	
	Examiner Rabon Sergent	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 9-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, and 9-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 26, 2008 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 6, 7, and 9-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehrlich et al. ('904) in view of van Der wal et al. ('445) and Mao ('572).

Ehrlich et al. disclose thermoplastic polyurethanes, wherein MDI is reacted with a blend of polyester polyol and polyether polyol, wherein the polyester polyol component and polyol relative amounts meet those claimed, and a chain extender component, wherein the chain extender component comprises straight chain diols, such as those having 2 to 6 carbon atoms, or

Art Unit: 1796

bis(hydroxyethyl)ethers of hydroquinone and further wherein up to 25 equivalent (molar) percent of the chain extender may be branched chain diols, diethylene glycol, or dipropylene glycol. See abstract; column 2, lines 40+; column 3, lines 6-43; columns 4-6; and column 7, lines 1-50, especially column 3, lines 38-43. Applicants' catalyst amount of claim 36 is disclosed at column 7, lines 47-50. Furthermore, patentees disclose the use of extrusion equipment and conventional processes for producing the thermoplastic polyurethane; therefore, applicants' claimed twin screw extruder and processing times (claims 37 and 39) are considered to be encompassed by patentees. Given the disclosed amounts of polyols and chain extenders, applicants' claimed ratio is considered to be met.

4. However, the primary reference is silent regarding the use of polyoxytetramethylene polyols and the use of the thermoplastic polyurethane to produce coated fabrics and conveyor belts. With respect to the issue of the polyoxytetramethylene polyol, van Der wal et al. disclose thermoplastic polyurethanes derived from blends of polyester diols and polyether diols, wherein the respective amounts of the polyester diol and polyether diol satisfy that instantly claimed and further wherein a suitable polyether diol is disclosed as being polyoxytetramethylene diol (column 3, lines 67 and 68). While van Der wal et al. disclose such polyols as polyoxypropylene-polyoxyethylene glycol, van Der wal et al. further disclose at column 4, lines 8 and 9 that poly(tetramethylene oxide) diol (polyoxytetramethylene polyol) is the most preferred polyether polyol. Therefore, the secondary reference establishes that the use of applicants' claimed diol within an analogous thermoplastic polyurethane was not only known at the time of invention, its use was preferred. Accordingly, it would have been obvious to incorporate such a polyether diol in the claimed amount into the composition of the primary

Art Unit: 1796

reference, so as to arrive at the instant invention. With respect to the issue of the production of coated fabrics and conveyor belts, it is noted that both van Der wal et al. and Mao disclose the production of thermoplastic polyurethanes, derived from blends of polyester polyols and polyether polyols, that are considered to be analogous to those of the primary reference, and further that van Der wal et al. disclose the production of conveyor belts and Mao discloses the production of coated fabrics (abstracts). Accordingly, since these applications for analogous thermoplastic polyurethanes were known at the time of invention, the position is taken that it would have been obvious to utilize the thermoplastic polyurethane composition of Ehrlich et al. to produce the instantly claimed coated fabrics and conveyor belts.

5. Applicants' response has been considered; however, it is insufficient to overcome the prior art rejection. Firstly, applicants' arguments appreciate neither the combined teachings of the references nor the teaching within van Der wal et al. that polyoxytetramethylene glycol is a preferred polyether polyol. Secondly, applicants have argued that Ehrlich et al. disclose that at least 15 wt% of the polyol can be replaced with a triol and that this would cause the polyurethane to crosslink. In response, Ehrlich et al. do not mandate the use of the argued triol; patentees clearly allow for the use of diol, as well. Furthermore, as evidenced by numerous recitations within the reference, it is clear that Ehrlich et al. requires the polyurethanes to be thermoplastic. Accordingly, applicants' argument that the polyurethane would be unsuitable for calendaring and extruded film application amount only to unsupported opinion. Thirdly, applicants have argued that Ehrlich et al. require a content of ethylene oxide to be present in the polyol portion. In response, given the teachings within van Der wal et al. regarding the preferred use of the polyoxytetramethylene polyol over ethylene oxide based polyols and the teachings within

Art Unit: 1796

Ehrlich et al. at column 5, lines 53-58 that as polyether polyol fraction or content decreases, the ethylene oxide content is reduced, the position is taken that at the reduced amounts or contents of the polyether polyol disclosed by van Der wal et al. and instantly claimed by applicants, it would have been obvious to employ the polyoxytetramethylene polyol in place of the ethylene oxide containing polyols. Fourthly, applicants have failed to rebut the *prima facie* case of obviousness by such means as a showing of unexpected results, wherein examples commensurate in scope with the claims have been compared against the closest available art, namely Ehrlich et al. It is noted that applicants' comparative examples within the specification fail to be representative of Ehrlich et al., because the exemplified comparative compositions fail to employ Ehrlich et al.'s disclosed polyol. It is not seen that applicants have addressed this issue.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

/Rabon Sergent/
Primary Examiner, Art Unit 1796

R. Sergent
September 13, 2008